

Junco hyemalis oregonus. Rather common.

Melospiza fasciata montanus. Not very common.

Melospiza lincolni. In the same places as the last, and about equally numerous during first part of the month.

Pipilo maculatus arcticus. Not common.

Dendroica auduboni. About a dozen individuals altogether were seen, and one was captured as late as October 24.

Parus gambeli. Abundant during the whole time of my stay. Exceedingly tame and, like other Paridæ, partially gregarious. Not seen at all at Pueblo in 1883.

Myadestes townsendi. But one was seen—October 31. The bird was common here in the spring of 1883.

Turdus ustulatus swainsoni. On October 30, I shot a belated Olive-backed Thrush in a willow thicket. It was very emaciated, one leg had been broken, and but one feather was left to 'adorn' its tail—or, perhaps, 'point a moral.' Its presence here at this date is thus easily accounted for.

Merula migratoria propinqua. I saw but four or five individuals during my stay.

Sialia arctica. Rather uncommon. The only one shot was a young male with the blue feathers edged with brown.

Sialia mexicana. Observed only upon two or three occasions, when they appeared to be migrating; coming from the north and disappearing towards the south.

AUGUST BIRDS OF THE CHILHOWEE MOUNTAINS, TENNESSEE.

BY F. W. LANGDON.

THE observations herein recorded were made chiefly in Blount County, East Tennessee, between August 11 and 21, 1886, inclusive. The elevations known as the 'Chilhowee Mountains,' are a group of spurs or offshoots from the Great Smoky Range of the East Tennessee and North Carolina border; and extend, nearly at right angles to the 'Smokies,' as a series of more or less parallel ridges, 1500 to 4000 feet in height, for fifteen or twenty miles in a general northwesterly direction. There are three main ranges answering the above description and these are limited or cut off, so to speak, at their northwestern extremities, by the Chilhowee range proper (called on some maps Chilhowee

'Mountain'). This latter range, about twenty miles in length, and nearly parallel with the 'Smokies,' is pierced (about twenty-five miles south-east of Knoxville) by Little River. A mile west of the 'gap' so formed is Mount Nebo, one of the sub-divisions of the Chilhowee range, and an objective point of the expedition, where are located some chalybeate springs and a hotel. From this locality excursions were made in various directions, notably one to the Great Smoky Mountains, about twenty miles south-east.

The altitudes of the higher peaks of the region range from 2452 feet at Nebo, to 6701—Clingman's Dome in the 'Smokies.'*

The whole Chilhowee group, including the principal range of that name, is situated in Blount and Sevier Counties, and is drained by the Little Pigeon, a tributary of the French Broad; and by Little and Little Tennessee Rivers, flowing into the Tennessee. The drainage of the entire region is thus eventually Ohioan.

The Chilhowee Mountains are not unknown to zoölogical science, Dr. James Lewis having described a species of land-shell, *Helix chilhoweensis*, from that region, about ten years ago.

The topography of the region is alternately mountain and 'cove'—as the little 'pockets' of tillable land, walled in by mountains except where they border the rivers, are called. Generally speaking a road following the river is the only outlet for these 'coves' that can be traversed by wagon.

The 'coves' passed through by the expedition were Miller's and Tuckaleechee,—said to be from six to eight miles in length and about a third as wide; Tuckaleechee being the larger of the two. Both are drained by Little River.

The entire mountain region is well wooded, and towards the 'Smokies' heavily timbered.

At Mt. Nebo the principal trees are poplar, oak, chestnut, chinquapin, hickory, beech, sweet and black gums; a few walnut, butternut, and birch; with a sprinkling of pines throughout and of small spruce along ravines and small streams. The undergrowth is chiefly of poplars, gums, dogwood, chinquapin, and,

* *Vide* Guyot, in Am. Jour. Sci. and Arts., 2nd ser., Vol. XXIV, p. 277; and Safford, 'Geology of Tennessee,' Nashville, 1869.

occasionally along streams, witch-hazel; in many places the 'mountain laurel' forms impenetrable thickets for miles.

'Pine Mountain,' adjoining Nebo on the east, and separated from it only by a shallow ravine, is clothed on its upper two-thirds with a mantle almost exclusively of pine, while its basal third corresponds closely with Nebo.

The foot-hills surrounding Nebo are mostly cleared of timber and under cultivation, corn, wheat and sorghum being the principal crops, with some cotton and tobacco. This is the case also in the 'coves' traversed on the way to the 'Smokies.' As the 'coves' are left behind, however, and the Great Smoky Range is approached the scenery becomes bolder in character, the route lying over mountainous ridges and the horizon shut in on all sides by range after range of mountains from three to six thousand feet in height. Along Little River the scenery in many places might fairly be called grand.

Night overtakes us on Scott Mountain at the home of Mr. A. J. Dorsey and his estimable family, whose hospitalities much enhance the enjoyment of the trip. Here we leave our team, and another day finds our party, ten in number, on foot for the 'Smokies,' seven miles distant, loaded down with guns, ornithological material, fishing tackle, photographic apparatus, cooking utensils, and provisions. Our headquarters on Defeat Mountain, a spur of the Smoky Range, was at a cattle-herder's camp, a small log cabin, situated at an altitude of perhaps 4000 feet, in the heart of a giant spruce and poplar forest; many trees of both species measuring six feet in diameter and fifty feet or more to a limb. Here, on a gentle slope covered with a velvety carpet of moss, partridge-berry vine, and spruce needles, we were lulled to rest by the babbling of the waters over the rocky bed of a neighboring trout brook (middle fork of Little River); this, with the *hoot-to-toot* of the Great Horned Owl and the notes of a full orchestra of katydids, furnished a symphony eminently appropriate to its surroundings. The 'patter of the rain on the roof,' however, which ensued later, was a musical event not so highly appreciated, since it necessitated the crowding of ten men into a cabin ten feet square.

As the sunbeams tip the crest of the 'Smokies' and struggle in splinters through the dark evergreen canopy about the camp, our ornithological eyes are greeted with the sight of such species

as the Hooded, the Worm-eating, Black-throated Blue, Cerulean, Blackburnian, Chestnut-sided, Black-throated Green, Black-and-white Creeping, and Canada Warblers (all taken within a few hours); whilst an occasional Pileated Woodpecker, or a party of Titmice or Blue Jays, add variety to the scene and sounds. Even the herpetologist might find food for contemplation in the huge rattlesnake with nine rattles and a button, killed by one of our photographic artists within a stone's throw of the camp; and the epicure sees food of a more substantial character in the speckled beauties supplied to our table from the neighboring stream.

Such localities as the one just described, at the junction of the poplar and spruce belts (altitude 4000 to 4500 feet) seemed a very paradise for the Mniotiltidæ and they were here found in greater numbers, both of species and of individuals, than elsewhere. Here, also, blackberries were in the height of their season; the deciduous foliage was as bright and fresh as in Ohio in May and June, and insect life correspondingly abundant.

With respect to the above-mentioned Warblers, it may be observed that their habits were not indicative of any migratory movement; on the contrary they appeared to be 'at home' in a summer resident sense; and the fact that the dates of observation are from two to four weeks ahead of their fall migration at Cincinnati may be considered as confirmatory of this view. Mr. Brewster's* observations in the adjoining portion of North Carolina, during May and June, 1885, are also to be considered in this connection.

Incomplete as it necessarily is, owing to lack of time and the unfavorable season for collecting, the present list fills several gaps in Mr. Brewster's paper just referred to, viz: *Totanus solitarius*, *Ægialitis vocifera*, *Falco sparverius*, *Megascops asio*, *Bubo virginianus*, *Helmitherus vermicivorus*, *Dendroica carulea*, and *D. vigorsii*; and adds five species and two subspecies to the list of birds heretofore recorded from the State †; namely: *Ampelis cedrorum*, *Dendroica pennsylvanica*, *D. carulea*, *D. carulescens*, *Sylvania canadensis*, *Dryobates villosus*, and *Vireo flavifrons alticola*.

* An Ornithological Reconnaissance in Western North Carolina.—The Auk, 1886, Vol. III, pp. 94-112 and 173-179.

† Vide Fox, List of Birds found in Roane County, Tennessee, during April, 1884, and March and April, 1885.—The Auk, III, 1886, pp. 315-320.

For valuable assistance in making the collection, as well as in saving skins that would otherwise have been lost, the writer is indebted to his colleague, Dr. G. M. Allen, of Cincinnati; and for an enjoyable time in other respects to the members of the party in general, not forgetting our two guides, Mr. A. J. Dorsey and son 'Jake.'

As regards the residents of the region in general, we found them intelligent, hospitable and obliging.

The altitudes mentioned are estimated, and based on information derived from various sources.*

The nomenclature is that of the A. O. U. Code and Check-List of North American Birds, 1886.

Total number of species and sub-species noted, 63.

201. *Ardea virescens*. GREEN HERON.—Little River, near Mt. Nebo; two specimens.

256. *Totanus solitarius*. SOLITARY SANDPIPER.—One individual observed August 21, at a roadside pond near Maryville, in the valley.

263. *Actitis macularia*. SPOTTED SANDPIPER.—Three specimens seen along Little River in the 'coves'; others at Henry's Mill.

273. *Ægialitis vocifera*. KILLDEER.—One heard in the suburbs of Knoxville.

289. *Colinus virginianus*. BOB-WHITE.—Abundant in the 'coves.' Large flock of young barely able to fly, observed August 16, in Tuckalee-chee; doubtless a second brood.

300. *Bonasa umbellus*. RUFFED GROUSE.—One individual observed on Mt. Nebo.

310. *Meleagris gallopavo*. WILD TURKEY.—Although no specimens were secured by us, our guide had flushed a flock of half-grown young a week previous. Dr. T. H. Kearney, of Knoxville, also informed us that he was with a party that killed one out of a flock a few days previous, within a mile or two of our camp. They are said to feed largely on 'huckleberries,' three species of which are found in abundance on the 'ridges.'

316. *Zenaidura macroura*. MOURNING DOVE.—Common in wheat-stubble in the 'coves.'

325. *Cathartes aura*. TURKEY VULTURE.—Common.

360. *Falco sparverius*. AMERICAN SPARROW HAWK.—Several observed in the 'coves.' Other species of Hawks, large and small, were noted, but at too great a distance for identification. Those most satisfactorily recognized were the Red-tailed and Red-shouldered.

373. *Magascops asio*. SCREECH OWL.—Identified by note; one individual only; altitude 2000 feet.

375. *Bubo virginianus*. GREAT HORNED OWL.—One heard at 4000 feet.

* *Vide* Safford, *Geology of Tennessee*, 1869; and Guyot, various papers in *Am. Journ. Sci. and Arts*, 1857 *et. seq.*

390. *Ceryle alcyon*. BELTED KINGFISHER.—Two or three specimens observed on Little River in the 'coves.'

393. *Dryobates villosus*. HAIRY WOODPECKER.—Several specimens taken, ranging from the valleys up to 2000 feet, do not differ appreciably from Ohio examples, and are referred to this form by Mr. Ridgway.

394. *Dryobates pubescens*. DOWNY WOODPECKER.—The same remarks are applicable to the present species.

405. *Ceophlæus pileatus*. PILEATED WOODPECKER.—Not common, even in heavy timber, and everywhere very shy. Of the six or eight individuals observed, two, male and female, were secured with some difficulty. Ranging from the valleys up to 4000 feet or more, their favorite foraging field seemed to be on the larger spruce and poplar trunks, within twenty feet of the ground, and such places were studded with bill-holes, in regular rows, resembling those of the 'Sapsuckers.' Their notes resemble the rapid, oft-repeated *chuck-up-chuck-up-chuck-up* of the Common Flicker, but are lower-pitched and repeated more slowly.

Of the specimens taken, one had its stomach filled with fourteen pokeberries, and the intestines deeply stained thereby a few hours after death. The peritoneal cavity of this bird contained a slender tape-worm, about 15 inches long and 1-32 inch wide; and in the sub-cutaneous tissue of the neck were two thread-like, round worms, of a pale pinkish tint and about three-fourths of an inch in length. Irides of adult male, pale yellow, finely speckled and mottled with red.

406. *Melanerpes erythrocephalus*. RED-HEADED WOODPECKER.—Common about clearings in the foot-hills and 'coves.' Not observed above about 1500 feet.

420. *Chordeiles virginianus*. NIGHT-HAWK.—Five observed flying about at midday, in Tuckaleechee Cove; others at dusk on Scott Mountain.

423. *Chætura pelagica*. CHIMNEY SWIFT.—Common as high as 5000 feet and throughout the 'coves.' The scarcity of houses and suitable chimneys for breeding purposes probably necessitates the resort of this species to its original homes in hollow trees. (See Brewster, *op. cit.*)

428. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD.—Common up to 3000 feet.

444. *Tyrannus tyrannus*. KINGBIRD.—Observed in parties of six or eight about 'deadennings' in the 'coves.' None seen in the mountains.

461. *Contopus virens*. WOOD PEWEE.—The common Flycatcher of the region; apparently even more abundant than in Ohio. Noted everywhere up to 4000 feet or more.

The scarcity or absence of the *Empidonaces* was a noteworthy feature of the region; no member of the genus being detected, though closely looked for in apparently favorable localities.

477. *Cyanocitta cristata*. BLUE JAY.—An ornithological tramp throughout the region, in straggling parties of from three to six individuals; ranging as high as 4000 feet.

488. *Corvus americanus*. AMERICAN CROW.—Common in the valleys and observed up to about 3000 feet.

? 511*b*. *Quiscalus quiscula*. BRONZED GRACKLE.—Observed only in the suburbs of Knoxville. As no specimens were obtained, the subspecies can only be decided by inference—hence the (?).

For evidence that this is the prevailing form in Tennessee. *vide* Ridgeway, Auk, 1886, III, p. 318, footnote.

529. *Spinus tristis*. AMERICAN GOLDFINCH.—Common in the ‘coves,’ and ranging up to 2500 feet.

560. *Spizella socialis*. CHIPPING SPARROW.—The common Sparrow. Abundant throughout the ‘coves’ in cornfields, etc., and a few observed on a piney ridge at an altitude of about 4000 feet.

563. *Spizella pusilla*. FIELD SPARROW.—Identified by note, and in one instance only, in a little ‘cove’ at an elevation of 3000 feet.

587. *Pipilo erythrophthalmus*. TOWHEE.—One specimen taken at an altitude of 2000 feet; others heard in full song.

593. *Cardinalis cardinalis*. CARDINAL.—Common about clearings, and observed up to 3000 feet.

Though in full song, their notes were quite sibilant in character rather than full and rounded as in Ohio.

598. *Passerina cyanea*. INDIGO BUNTING.—Very common in the ‘coves’ and lowlands; not observed above 1000–1200 feet.

(—). *Passer domesticus*. EUROPEAN HOUSE SPARROW.—A few observed at Knoxville and Maryville.

608. *Piranga erythromelas*. SCARLET TANAGER.—One specimen, a male in immature plumage, taken at 2500 feet.

610. *Piranga rubra*. SUMMER TANAGER.—One taken at 2000 feet; others heard.

611. *Progne subis*. PURPLE MARTIN.—Noted only at Knoxville and Maryville.

619. *Ampelis cedrorum*. CEDAR WAXWING.—One specimen in immature plumage, taken at 3000 feet.

624. *Vireo olivaceus*. RED-EYED VIREO.—Very common everywhere up to 4000 feet. The many specimens examined failed to show the peculiarities in plumage noted by Mr. Brewster* in a single specimen from the Black Mountain in North Carolina.

628. *Vireo flavifrons*. YELLOW-THROATED VIREO.—Two specimens; Pine Mountain, at 1500 feet. One of these is a ‘first plumage’ bird, just acquiring fall dress.

629*c*. *Vireo solitarius alticola*. † MOUNTAIN SOLITARY VIREO.—Three specimens taken; one at 1500 feet, on Pine Mountain (Chilhowee Range), and two at 4000 feet, on Defeat Mountain (Smoky Range).

Mr. Brewster has kindly compared these for me with the types in his collection and writes: “I am satisfied that the two are identical. In fact I find no differences of importance except such as would be expected in view of the fact that my birds are all in perfect nuptial plumage, yours in ragged, moulting summer plumage.”

* Auk, III, 1886, p. 173.

† *Vide* Brewster, Auk, III, 1886, p. III.

On comparison with Ohio specimens of *V. solitarius*, the larger size, especially of bill and wing, and the generally darker color of the upper parts in the Tennessee birds are very noticeable.

631. *Vireo noveboracensis*. WHITE-EYED VIREO.—One specimen taken; heard several times in the 'coves.'

636. *Mniotilta varia*. BLACK-AND-WHITE WARBLER.—Very common, ranging from the valleys up to 3000 feet.

639. *Helmitherus vermivorus*. WORM-EATING WARBLER.—Taken in dense laurel and blackberry thickets on Smoky Range, up to 4000 feet; and about ravines at Mt. Nebo, 2000 feet. Note a feeble *chip*.

654. *Dendroica cærulescens*. BLACK-THROATED BLUE WARBLER.—Rather common in dark spruce forest about the head of Little River, frequenting laurel thickets and undergrowth of poplar, beech, and sweet gum. Altitude about 4000 feet.

658. *Dendroica cærulea*. CERULEAN WARBLER.—Common in same localities as the last, but frequenting the higher trees.

659. *Dendroica pensylvanica*. CHESTNUT-SIDED WARBLER.—Two specimens; 2000 to 2500 feet, in oak woods.

662. *Dendroica blackburniæ*. BLACKBURNIAN WARBLER.—The most abundant species of the family; ranging from 2000 to 4000 feet, and keeping mostly in the higher tree tops. Adults of both sexes and young of the year taken together.

667. *Dendroica virens*. BLACK-THROATED GREEN WARBLER.—Several specimens taken at 4000 feet, in spruce woods.

671. *Dendroica vigorsii*. PINE WARBLER.—One specimen only; Pine Mountain, 1500 feet. A young in first plumage just acquiring autumnal dress.

674. *Seiurus aurocapillus*. OVEN-BIRD.—Taken at altitudes ranging from 1000 to 2000 feet.

681. *Geothlypis trichas*. MARYLAND YELLOW-THROAT.—Common in the valleys, in the weeds bordering streams.

683. *Icteria virens*. YELLOW-BREASTED CHAT.—One taken at base of Mt. Nebo; others heard.

684. *Sylvania mitrata*. HOODED WARBLER.—Common in little weed patches near the springs at Mt. Nebo (2000 feet); and one pair observed apparently 'at home' in a shady ravine near our camp on Defeat Mountain (4000 feet), keeping chiefly on or near the ground and moss-covered rocks. Note a single clear *tschip*, resembling that of the Cardinal but much more resonant and musical in tone. This note was repeated at short intervals (one to two minutes) for hours at a time, as the birds foraged for insects, the dark, green carpet of moss and partridge-berry vine forming an effective contrast with their bright, yellow plumage.

686. *Sylvania canadensis*. CANADIAN WARBLER.—A pair taken at 2000 feet, on young poplars in a laurel thicket, August 19.

687. *Setophaga ruticilla*. AMERICAN REDSTART.—Several observed about shady ravines, ranging from 1000 to 2500 feet.

704. *Galeoscoptes carolinensis*. CATBIRD.—A few only observed, ranging from the lowlands to 2000 feet,

718. *Thryothorus ludovicianus*. CAROLINA WREN.—Common everywhere up to 3000 feet.

727. *Sitta carolinensis*. WHITE-BREASTED NUTHATCH.—Common, ranging from 1000 to 3000 feet.

731. *Parus bicolor*. TUFTED TITMOUSE.—Very common in the valleys and observed as high as 3000 feet.

736. *Parus carolinensis*. CAROLINA CHICKADEE.—Common with the preceding species, of which it was an almost constant companion, as in Ohio. No *P. atricapillus* observed, although carefully looked for.

751. *Polioptila cærulea*. BLUE-GRAY GNATCATCHER.—Common, ranging from the lowlands up to 3000 feet.

755. *Turdus mustelinus*. WOOD THRUSH.—Specimens taken at 2000 and 4000 feet.

761. *Merula migratoria*. AMERICAN ROBIN.—While standing in the cupola of the University at Knoxville, a small Hawk, resembling the Pigeon Hawk, passed close by. Following it with the eye across an adjoining pasture, it was observed to flush a bird from a fence corner and, after a stern chase of thirty or forty yards, to seize it. A lively tussel ensued, after which the Hawk rose, heavily weighted, and took refuge in some neighboring trees. A few feathers secured at the site of the struggle have been kindly identified by Mr. Ridgway as those of a young Robin, and on these rests the admission of the species to our list, as no other specimens were observed.

766. *Sialia sialis*. BLUEBIRD.—A few noted about 'deadenings,' in the 'coves.'

SOME RARE FLORIDA BIRDS.

BY W. E. D. SCOTT.

Gelochelidon nilotica. GULL-BILLED TERN.—This species appears to be rare on the Gulf Coast. The only record I have of its occurrence is a male taken at John's Pass, Hillsboro' County, December 17, 1886.

Chondestes grammacus. LARK FINCH.—On September 19, 1886, I saw a single individual of this species in my garden at Tarpon Springs, Hillsboro' County. Later, my friend, Mr. J. W. Atkins, took an adult female at Punta Rossa. Mr. Atkins has kindly sent me the bird for identification. It was taken September 26, 1886.

Vireo altiloquus barbatulus. BLACK-WHISKERED VIREO.—